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NASA Procedural Requirements

NPR 8621.1C

Effective Date: May 19, 2016

Expiration Date: May 19,
2021**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

Request Notification of Change (NASA Only)

Subject: NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping

Responsible Office: Office of Safety and Mission Assurance

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Chapter 2. Mishap Response, Notification, and Classification

2.1 Initial Mishap Response

2.1.1 Employees shall:

a. Employees who witness or are involved in a workplace injury, illness, or property damage event shall notify emergency response (911 or designated emergency contact) of the need for assistance as soon as the safety of personnel permits.

Note: Not all NASA mishaps or close calls require local emergency response notification. Situations involving damages to test articles or other items may need to be secured by means other than what the Program/Project/Center organizations can provide.

b. Complete witness statements on request of emergency response or IRT personnel.

2.1.2 The Cognizant Safety Office shall:

a. Upon notification of a mishap or close call that triggers the initiation of the MPCP (as defined in the applicable MPCP), initiate the Center MPCP and support the program/project as the Program/Project MPCP is initiated.

b. Deploy the IRT to support the investigation in accordance with the Center or Program/Project MPCP.

c. Assist the IRT with the collection of witness statements.

2.1.3 Upon notification of a mishap, the Program/Project Manager shall initiate the Program/Project MPCP.

2.1.4 The Center Office of Protective Services (OPS) shall support the incident commander, cognizant Safety Office, and IRT in securing the site and impounding data, records, equipment, and facilities.

2.1.5 The IRT shall:

a. Preserve potential evidence, document the scene, obtain witness statements, and collect debris.

Note: Written witness statements obtained within the first 24 hours of a mishap or close call are privileged and protected if collected by a Federal employee. If needed, Federal employee IRT members can also grant privilege anytime thereafter.

Note: Where possible, written witness statements should be collected on a NASA form that includes the statement of privilege (Figure 1).

Note: Written and verbal witness statements given after 24 hours of a mishap or close call, as part of a NASA mishap investigation, where witnesses are informed their accounts will not be released, are privileged and protected.

Note: NASA will not grant privilege to witnesses for written or verbal witness statements when an external investigating body is expected to be the sole mishap IA (e.g., catastrophic aerospace vehicle failure or airplane loss).

Note: External IAs are not required to comply with NPR 8621.1 (e.g., a congressionally appointed mishap investigation board or the NTSB conducting an investigation involving an airplane or catastrophic vehicle loss). Consequently, NASA cannot guarantee privileged statements will be protected from the IA or other authorities.

- b. Refrain from giving witnesses a copy of privileged written statements or transcripts of verbal witness statements. If witness statements or transcripts of witness statements are provided to witnesses, NASA cannot ensure privilege and confidentiality.
- c. Conduct evidence preservation actions without affecting essential safety operations.
- d. Collect and impound, with cognizant Safety Office, supervisors, and OPS support, appropriate data, records, equipment, witness statements, and facilities that may be involved in the mishap.

2.1.6 The IA shall coordinate with the Contracting Officer prior to accessing the site, impounding contractor data, and interviewing contractor personnel as permitted by the contract.

Note: For incidents outside Center property, NASA has the authority to impound NASA property; however, impounding or collecting other data, records, and equipment is determined by local and Federal laws, agency agreements, and contracts.

2.1.7 The CD or ED/OHO shall report, by telephone or e-mail, to the Administrator when it becomes known that there is a work-related fatality or serious injury or illness of a NASA employee, resident non-NASA Federal employee, or resident contractor (a NASA contractor whose primary place of business is on or near a NASA Center or NASA-owned facility).

2.2 Initial Mishap Notifications

2.2.1 Supervisors shall notify the cognizant Safety Office when a mishap or close call occurs or is suspected.

2.2.2 The Cognizant Safety Office shall:

a. Notify OSMA. After emergency response has been initiated and within one hour of a Type A or Type B mishap or a high-visibility mishap or close call, the cognizant Safety Office shall notify OSMA by calling 1-321-861-2312, or, if no answer, by calling the NASA Headquarters After Hours Contact Center at 1-866-230-6272.

b. During this notification, provide the following information:

- (1) Center name.
- (2) Location of incident.
- (3) Time of incident.
- (4) Number of fatalities, if known.
- (5) Number of hospitalized employees, if known.
- (6) Type of injury, if known.
- (7) Type and estimate of damage, if known.
- (8) Contact person and telephone number.
- (9) Brief description of the mishap.

c. For Type A and Type B mishaps and high-visibility mishaps and close calls, send an electronic notification to OSMA containing information found in section 2.2.2.b.

d. Within one hour, report a human test subject injury that results in a loss of life, permanent disability, hospitalization, first aid, or lost workdays in accordance with NPR 7100.1, Protection of Human Research Subjects, Ch. 7.

e. Report to the Occupational Safety and Health Administration (OSHA) in accordance with 29 CFR pt. 1904.

f. After notifying OSHA, inform OSMA that an oral report has been provided to OSHA.

2.2.3 The IRT shall:

- a. Notify the Center Public Affairs Office (PAO) about casualties, damages, and any potential hazards to the public.

- b. Support the release of information to the media by PAO and other offices to alert Center personnel and the public of any known hazards and their potential effects.
- c. At the earliest opportunity, advise the supervisor of a Federal employee if drug testing should be requested in accordance with NPR 3792.1, Plan for a Drug-Free Workplace.

Note: In accordance with NPR 3792.1, the supervisor will initiate drug testing after a mishap if the mishap results in a fatality or personal injury requiring immediate hospitalization or in damages estimated to be in excess of \$10,000 to Government or private property. This applies to Federal employees only.

- d. At the earliest opportunity, notify the Contracting Officer or the Contracting Officer's Representative if drug testing for contract personnel is to be implemented according to the contract or applicable agreements.

2.2.4 International Mishaps.

2.2.4.1 The Official in Charge shall notify, by the most expeditious means, the Chief, OSMA; the appropriate MDAA; and the cognizant Safety Office that a mishap has occurred on foreign territory or in international waters.

2.2.4.2 When a Type A or Type B mishap occurs outside the United States, for example, at a tracking station or during an aircraft, rocket, or balloon launch operation involving NASA personnel, the official in charge, in coordination with the AA/OCOM and the AA/OIIR, shall release factual details, limited to the same details outlined in this NPR, through the U.S. Embassy or Consular Office in the locale of the mishap, in accordance with policies and procedures established by that office.

2.2.4.3 The MDAA shall notify, by the most expeditious means, the Associate Administrator (AA) that a mishap has occurred on foreign territory or in international waters.

2.2.4.4 The AA shall notify, by the most expeditious means, the Administrator; the Deputy Administrator; AA/OCOM; the Office of the General Counsel; and other appropriate staff that an international mishap has occurred.

2.2.5 Mishap (after mishap scene is secured) public release of information.

2.2.5.1 The NASA HQ OCOM shall approve the release of all information related to NASA Type A and Type B mishaps and high-visibility mishaps and close calls prior to release to media or public.

2.2.5.2 The AA/OCOM, or designee, shall:

- a. Within one hour of the incident, release information to the media and alert Center personnel and the public of any known hazards and their potential effects, and provide instructions to mitigate the risk and harm.
- b. As warranted and with the assistance of the cognizant Safety Office, IRT, and CD or ED/OHO, release interim public affairs status reports about the investigation to the media through the Center Public Affairs Office (PAO).

2.2.5.3 The Center PAO shall:

- a. Prior to the appointment of an IA and in coordination with AA/OCOM, as warranted, identify and disseminate any preliminary information, video, and imagery related to the mishap that is suitable for public release.
- b. When a fatality or injury (permanent disability) has occurred to a NASA employee involved in a Center work-related activity, coordinate with AA/OCOM and then promptly announce the incident to the public.

2.2.5.4 The CD or ED/OHO shall ensure that:

- a. In the case of Federal fatalities, release of victim names will be made through Center PAO at the earliest possible time after CD or ED/OHO and AA/OCOM concurrence that the next of kin notification has been accomplished with CD or ED/OHO protocols.
- b. Initial announcements include what is known at the time, the injuries or fatalities that have occurred, and when additional information is expected to be available.
- c. For Centers located on a military installation, release of victim names will be made according to procedures previously agreed upon by the installation commander and CD or ED/OHO.

2.2.5.5 Resident contractor and grantee employee casualties. NASA does not assume responsibility for the release of information concerning mishaps involving resident contractor or grantee employees except when a Type A injury or illness mishap occurs onsite at a Center or at HQ or involves a NASA-managed program administered by that Center. In this instance, the CD or ED/OHO, in coordination with the Center PAO and HQ OCOM, shall announce within one hour that a mishap has likely occurred and, at the earliest possible time, the specific facts regarding the injury or illness.

Note: Neither the CD nor the ED/OHO will announce the identity of non-NASA personnel involved.

2.3 Aircraft Mishaps and Close Calls

2.3.1 Employees shall immediately, and by the most expeditious means available, report an aircraft mishap or close call, including an NTSB-defined accident (defined in 49 CFR pt. 830.5), to the cognizant Safety Office and the Center Chief of Flight Operations and provide the information required under 49 CFR pt. 830.6.

Note: Employees shall report unexpected aircraft departure from controlled flight for all aircraft except when departure from controlled flight has been pre-briefed (e.g., upset recovery training, high angle of attack [AOA] envelope testing, aerobatics, or Out of Controlled Flight [OCF] for training) or mitigated through the flight test process inherent at each Center.

2.3.2 The Center's Chief of Flight Operations or his or her designee shall immediately notify the NTSB (per 49 CFR pt. 830) of the NTSB-defined mishap, and then advise OSMA Mishap Investigation Program Executive and the Aircraft Management Division (AMD) that NTSB has been informed. Note: NTSB notification definitions are found in 49 CFR pt. 830.2.

2.3.3 Within ten workdays of an aircraft mishap or close call that meets the reporting requirements in 49 CFR pt. 830.5, the Center Chief of Flight Operations shall submit an NTSB Form 6120 to the NTSB regional office closest to the location of the mishap or close call.

2.4 Mishap or Close Call Classification

2.4.1 The severity of the personnel injury and the direct cost of the mishap or close call (property damage or mission failure) determine the classification level of the mishap or close call (Table A).

2.4.2 The MDAA, CD, and the ED/OHO or designees shall, within 24 hours, determine the mishap classification level for all mishaps within their jurisdiction and obtain concurrence on this classification level from the Chief/OSMA for Type A and Type B mishaps and high-visibility mishaps and close calls.

Note: Aircraft operations are managed by a program-independent flight operations office; therefore, the CD serves as the Appointing Official (AO) for Type A and Type B mishaps and high-visibility mishaps and close calls involving aircraft managed by his or her Center.

Table A. Mishap Classification Levels

Classification Level	Property Damage	Injury
Type A Mishap	<p>Total direct cost of mission failure and property damage of \$2,000,000 or more,</p> <p>or</p> <p>Crewed aircraft hull loss,</p> <p>or</p> <p>Unexpected aircraft departure from controlled flight for all aircraft except when departure from controlled flight has been pre-briefed (e.g., upset recovery training, high AOA envelope testing, aerobatics, or OCF for training) or mitigated through the flight test process inherent at each Center.</p>	<p>Occupational injury or illness resulting in</p> <p>A fatality,</p> <p>or</p> <p>A permanent total disability.</p>
Type B Mishap	<p>Total direct cost of mission failure and property damage of at least \$500,000, but less than \$2,000,000.</p>	<p>Occupational injury or illness resulting in</p> <p>A permanent partial disability,</p> <p>or</p> <p>Hospitalization for inpatient care of three or more people within 30</p>

		workdays of the mishap.
Type C Mishap	Total direct cost of mission failure and property damage of at least \$50,000, but less than \$500,000.	Nonfatal OSHA-recordable occupational injury or illness resulting in days away from work, or restricted duty, or transfer to another job beyond the day or shift on which it occurred. or Hospitalization for inpatient care of one or two people within 30 workdays of the mishap.
Type D Mishap	Total direct cost of mission failure and property damage of at least \$20,000, but less than \$50,000.	Nonfatal OSHA-recordable occupational injury or illness that does not meet the definition of a Type C mishap.
Close Call	No equipment or property damage, or minor equipment or property damage of less than \$20,000, but event possesses the potential to cause a mishap	No injury or only minor injury requiring first aid, but event possesses the potential to cause a mishap.

2.4.3 The responsible organization, with review and concurrence of the cognizant Safety Office, shall calculate the direct cost of a mishap or close call. Calculations are done by adding all of the actual or estimated costs of damaged or destroyed property, mission failure, lost commodity (e.g., the cost of the fluid lost from a ruptured pressure vessel), and resultant costs such as environmental decontamination, property cleanup, and restoration. Estimated costs are calculated by using the greater of the actual or the fair market value. Actual repair or replacement costs, labor (i.e., the actual value of replacement or repair hours for internal and external or contracted labor) should be included in calculations.

Note: The initial estimate of the direct cost is calculated in the first 24 hours because the AO uses this estimate to determine the classification of the incident and the resources to allocate to the investigation. The final direct cost is calculated as the damage assessments are completed and is incorporated into the mishap investigation report. The final mishap classification level could change based on the final estimate of the direct cost. The IA ex officio verifies interim costs upon completion of investigation and that cost has been included and meets the guidelines in this NPR. This figure is subject to correction or validation by the official responsible for authorizing closure of the mishap record. Upon mishap closure, the cognizant Safety Office either confirms final cost or modifies based on most current cost information.

Note: Replacement cost to purchase commercially available part or manufacture custom part as needed is considered an equivalent replacement.

Note: The direct cost of the mishap or close call includes the actual costs of replacement parts as if these were purchased new.

Note: Indirect costs that would not be part of a direct cost calculation include:

1. Cost of expended emergency response or supplies.
2. Training and compensating replacement personnel.
3. Workers' compensation costs.
4. Medical treatment costs.
5. Lost productivity including lost use of damaged equipment.
6. Depreciation of damaged equipment.
7. Cost of the safety mishap investigation to include analysis, inspection, and travel.
8. Schedule delays.

9. Legal liability costs and fines.

10. Insurance costs.

11. Corrective or preventive action costs.

12. Costs associated with incident reporting and recordkeeping.

2.4.4 The responsible program manager or designee, in coordination with the cognizant Chief Financial Officer or designee, shall calculate the cost of a mission failure by determining the cost of the "unique" mission from Mission Approval (reference NPR 7120.5E, Key Decision Point C) through project closeout, including consumables (e.g., fuel), launch costs, and dedicated institutional support costs such as Deep Space Network, NASA Engineering and Safety Center, Independent Technical Authority, or others.

Note: Example of mission failure—The launch vehicle loses a main engine on ascent and fails to deliver its payload to its intended low-Earth orbit. The preapproved minimum mission success criteria are obviously unmet. The cost of this mission failure would be the cost of the launch vehicle processing and operations (labor and consumables) dedicated to this mission and the entire payload cost accrued since its approval (Key Decision Point C or equivalent).

Note: Example of incident not considered a mission failure—The Mars Exploration Rover Spirit fails long after it has met its minimum success criteria (minimum mission objectives). This would not be classified as a mission failure, so no cost would be assigned. The program manager may choose to investigate this failure, but there would be no cost assigned.

2.5 Post-Mishap Notifications

2.5.1 The CD, the ED/OHO, and the MDAA shall report, by telephone or e-mail, to the Administrator within 24 hours of learning the instance of a NASA Type A or Type B mishap or high-visibility mishap or close call.

2.5.2 The NASA Office of Inspector General (OIG) and the Center's Office of the Chief Counsel or the NASA Office of the General Counsel shall be notified of information potentially related to criminal activity in connection with a mishap.

Note: All personnel governed by this NPR can make this notification.

2.5.3 Recording the mishap or close call.

2.5.3.1 The Cognizant Safety Office shall:

a. Within 24 hours of notification, ensure all NASA mishaps and close calls are initially recorded in NMIS and are updated throughout the investigation.

b. Enter all information for aircraft mishaps and close calls listed in 49 CFR pt. 830.6, with the exception of the aircrew members' names, into NMIS.

2.5.3.2 The occupational health representative or other medical person shall provide the appropriate medical information regarding the persons injured and the nature of the injuries as a result of a mishap or close call to the cognizant Safety Office for inclusion in the investigation report and NMIS.

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